@AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

COMPREHENSIVE VALIDATION PACKAGE

ATL Applications

INVENTORY SHEET

WORK ORDER # 0908456C

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Completed by:

Kara McKiernan	Kara McKiernan/ Document Control	09/17/09
(Signature)	(Print Name & Title)	(Date)

WORK ORDER #: 0908456C

Work Order Summary

CLIENT:	Mr. Taeko Minegishi Environmental Health & Engineering, Inc. 117 Fourth Avenue Needham, MA 02494	**BILL TO:**	Accounts Payable Environmental Health & Engineering, Inc. 117 Fourth Avenue Needham, MA 02494
PHONE:	800-825-5343	**P.O. #**	16512
FAX:	781-247-4305	**PROJECT #**	16512
DATE RECEIVED:	08/21/2009	**CONTACT:**	Ausha Scott
DATE COMPLETED:	09/16/2009		

FRACTION #	NAME	TEST
41A	100600	ATL Applications
41AA	100600 Lab Duplicate	ATL Applications
42A	100601	ATL Applications
43A	100602	ATL Applications
44A	100603	ATL Applications
45A	100604	ATL Applications
46A	100605	ATL Applications
47A	100171	ATL Applications
48A	100172	ATL Applications
49A	100173	ATL Applications
50A	100174	ATL Applications
50AA	100174 Lab Duplicate	ATL Applications
51A	100175	ATL Applications
52A	100176	ATL Applications
53A	100231	ATL Applications
54A	100232	ATL Applications
55A	100233	ATL Applications

Continued on next page

Air Toxics LTD.
Laboratory Services Since 1989

WORK ORDER #: 0908456C

Work Order Summary

CLIENT:	Mr. Taeko Minegishi Environmental Health & Engineering, Inc. 117 Fourth Avenue Needham, MA 02494	**BILL TO:**	Accounts Payable Environmental Health & Engineering, Inc. 117 Fourth Avenue Needham, MA 02494
PHONE:	800-825-5343	**P.O. #**	16512
FAX:	781-247-4305	**PROJECT #**	16512
DATE RECEIVED:	08/21/2009	**CONTACT:**	Ausha Scott
DATE COMPLETED:	09/16/2009		

FRACTION #	NAME	TEST
56A	100234	ATL Applications
57A	100235	ATL Applications
58A	100236	ATL Applications
59A	Method Blank	ATL Applications
59B	Method Blank	ATL Applications
60A	CCV	ATL Applications

CERTIFIED BY: Linda S. Frumarn

Laboratory Director

DATE: 09/16/09

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Hydrogen Sulfide by Radiello 170
Environmental Health & Engineering, Inc.
Workorder# 0908456C

Eighteen Radiello 170 (H2S) samples were received on August 21, 2009. The procedure involves adsorption of H2S by zinc acetate to form zinc sulfide. The sulfide is then recovered by extraction with water and addition of ferric chloride in a strongly acidic solution to produce methylene blue. Methylene blue absorbance is then measured at 665 nm using a spectrophotometer. Results are reported in uG and uG/m3.

Sampling rate of 69 mL/min for H2S was provided by the manufacturer.

Receiving Notes

A Temperature Blank was not included with the shipment. Temperature was measured on a representative sample and was not within 4±2 °C. Coolant in the form of blue ice was present. Analysis proceeded.

Sample collection dates were not provided on the Chain of Custody for all samples. The client was contacted and a dates were provided.

Analytical Notes

Results were calculated based on 25 deg C without temperature correction. The actual exposure time was used to calculate sample concentrations and reporting limits.

An exposure time of 20000 minutes was used for the QC samples.

All media used for the sampling were supplied by the client. Blank subtraction was not performed on the sample results since the media used for Method Blanks may be from a different lot than the media used for the samples.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicate as follows:
B - Compound present in laboratory blank greater than reporting limit.
J - Estimated value.
E - Exceeds instrument calibration range.
S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the detection limit.
M - Reported value may be biased due to apparent matrix interferences.
N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

Sample Results and Raw Data

AIR TOXICS LTD.

ATL Application # 59 for RAD 170 (Hydrogen Sulfide)

Spectrophotometer

Field Sample I.D.	Lab Sample I.D.	Collection Date	Analysis Date	Dilution Factor	Reporting Limit (ug)	Reporting Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
100600	0908456C-41A	8/19/2009	8/25/2009	1.00	0.80	0.55	5.5	3.8
100600 Duplicate	0908456C-41AA	8/19/2009	8/25/2009	1.00	0.80	0.55	5.5	3.8
100601	0908456C-42A	8/19/2009	8/25/2009	1.00	0.80	0.55	1.4	0.94
100602	0908456C-43A	8/19/2009	8/25/2009	1.00	0.80	0.55	3.9	2.7
100603	0908456C-44A	8/19/2009	8/25/2009	1.00	0.80	0.55	3.8	2.6
100604	0908456C-45A	8/19/2009	8/25/2009	1.00	0.80	0.55	ND	ND
100605	0908456C-46A	8/19/2009	8/25/2009	1.00	0.80	0.55	ND	ND
100171	0908456C-47A	8/18/2009	8/25/2009	1.00	0.80	0.55	1.4	0.96
100172	0908456C-48A	8/18/2009	8/25/2009	1.00	0.80	0.55	1.6	1.1
100173	0908456C-49A	8/18/2009	8/25/2009	1.00	0.80	0.55	2.8	1.9
100174	0908456C-50A	8/18/2009	8/25/2009	1.00	0.80	0.55	1.8	1.2
100174 Duplicate	0908456C-50AA	8/18/2009	8/25/2009	1.00	0.80	0.55	1.8	1.2
100175	0908456C-51A	8/18/2009	8/25/2009	1.00	0.80	0.55	1.5	1.0
100176	0908456C-52A	8/18/2009	8/25/2009	1.00	0.80	0.55	ND	ND
100231	0908456C-53A	8/20/2009	8/25/2009	1.00	0.80	0.55	1.9	1.3
100232	0908456C-54A	8/20/2009	8/25/2009	1.00	0.80	0.55	1.8	1.3
100233	0908456C-55A	8/20/2009	8/25/2009	1.00	0.80	0.55	1.6	1.1
100234	0908456C-56A	8/20/2009	8/25/2009	1.00	0.80	0.55	ND	ND
100235	0908456C-57A	8/20/2009	8/25/2009	1.00	0.80	0.55	ND	ND
100236	0908456C-58A	8/20/2009	8/25/2009	1.00	0.80	0.55	ND	ND
Method Blank	0908456C-59A	NA	8/25/2009	1.00	0.80	0.55	ND	ND
Method Blank	0908456C-59B	NA	8/25/2009	1.00	0.80	0.55	ND	ND
								%Rec
CCV	0908456C-60A	NA	8/25/2009	1.00	0.80	0.55		100

COMMENTS: 1. NA=Not Applicable
2. ND=Not Detected
3. Exposure time of 20000 minutes was assumed for the QC samples and samples 100604, 100605, 100176 and 100236.
4. Background subtraction not performed.

9000

Hydrogen Sulfide Radiello Calculation Worksheet

Workorder #:	0908456C	
Sampling Rate (ng/ppb.min)	0.096	Typically0.096 for H2S
Sampling T (deg C)	25	Typically 25
Volume (mL)	10.5	Typically 10.5 for H2S
Date of Analysis:	8/25/2009	
Corrected Q	0.096	Takes into account temp

Q includes conversion from Sulfide to H2S

	(Abs-Y-int)xDF / Slope	Conc(ug/mL)xVol (mL)	conc (ug sulfide) *MW H2S / MW Sulfide	Conc (ug) x 1000 / Q x Duration	ppbx mw / 24.45

LabSampleID	Client	Date of Collection	Abs	Duration (min)	DF	Conc (ug/mL) of sulfide	Conc (ug) of sulfide	Conc (ug) of H2S	T Corrected, no Blank correction: Conc (ppb) of H2S	T Corrected, no Blank correction: Conc (ug/m3) of H2S
41A	100600	8/19/2009	0.539	19850	1.00	0.493674332	5.18358049	5.508786725	2.720	3.792
41AA	100600 Duplicate	8/19/2009	0.538	19850	1.00	0.492717189	5.173530481	5.498106201	2.715	3.784
42A	100601	8/19/2009	0.151	19850	1.00	0.122302558	1.284176859	1.36474324	0.674	0.939
43A	100602	8/19/2009	0.384	19850	1.00	0.345317051	3.62582904	3.853305436	1.903	2.652
44A	100603	8/19/2009	0.376	19850	1.00	0.337659901	3.545428965	3.76786124	1.861	2.593
45A	100604	8/19/2009	0.015	19963	1.00	-0.007868992	-0.082624414	-0.087808085	-0.043	-0.060
46A	100605	8/19/2009	0.013	19963	1.00	-0.009783279	-0.102724433	-0.109169134	-0.054	-0.075
47A	100171	8/18/2009	0.154	19963	1.00	0.125173989	1.314326887	1.396784813	0.686	0.956
48A	100172	8/18/2009	0.173	19963	1.00	0.14335972	1.505277065	1.599714778	0.785	1.095
49A	100173	8/18/2009	0.287	19963	1.00	0.252474108	2.650978132	2.817294565	1.383	1.928
50A	100174	8/18/2009	0.188	19963	1.00	0.157716877	1.656027205	1.759922644	0.864	1.205
50AA	100174 Duplicate	8/18/2009	0.188	19963	1.00	0.157716877	1.656027205	1.759922644	0.864	1.205
51A	100175	8/18/2009	0.163	19963	1.00	0.133788283	1.404776971	1.492909533	0.733	1.022
52A	100176	8/18/2009	0.014	19963	1.00	-0.008826136	-0.092674424	-0.098488609	-0.048	-0.067
53A	100231	8/20/2009	0.198	19712	1.00	0.167288314	1.756527299	1.866727889	0.928	1.294
54A	100232	8/20/2009	0.193	19712	1.00	0.162502595	1.706277252	1.813325267	0.902	1.257
55A	100233	8/20/2009	0.171	19712	1.00	0.141445433	1.485177046	1.578353729	0.785	1.094
56A	100234	8/20/2009	0.033	19712	1.00	0.009359596	0.098275754	0.104441355	0.052	0.072
57A	100235	8/20/2009	0.095	19712	1.00	0.068702508	0.721376335	0.766633871	0.381	0.531
58A	100236	8/20/2009	0.014	19963	1.00	-0.008826136	-0.092674424	-0.098488609	-0.048	-0.067
					1.00	-0.022226148	-0.233374555	-0.248015952	#DIV/0!	#DIV/0!
					1.00	-0.022226148	-0.233374555	-0.248015952	#DIV/0!	#DIV/0!
59A	Method Blank	NA	0.018	19963	1.00	-0.004997561	-0.052474386	-0.055766512	-0.027	-0.038
59B	Method Blank	NA	0.016	19963	1.00	-0.006911848	-0.072574405	-0.077127561	-0.038	-0.053
60A	CCV	NA	0.618	19963	1.00	0.569288689	5.97753123	6.352548156	3.119	4.348

QC Duration	CCV Spike Amt
19963	0.572

Verified: HH and AW on 9/4/09

Low PointxDF	RL(ug/mL)xVol (mL)	RL (ug sulfide) *MW H2S / MW Sulfide	Q includes conversion from Sulfide to H2S: RL (ug) x 1000 / Q x Duration	ppbx mw / 24.45

Calibration Data — Calibration Date 8/25/2009 — Linear Regression

					T Corrected, no Blank correction					
RL(ug/ml) of sulfide	RL (ug) of sulfide	Conc (ug) of H2S	RL (ppb) of H2S	RL (ug/m3)	Result (ug) H2S	Result (ug/m3) H2S	%Rec	ug/ml of sulfide	absorbance	
0.072	0.752	0.798966249	0.39	0.55	5.508786725	3.791790299		0	0	Slope 1.044775146
0.072	0.752	0.798966249	0.39	0.55	5.498106201	3.784438715		0.0716	0.088	Y-int 0.023221327
0.072	0.752	0.798966249	0.39	0.55	1.36474324	0.939375662		0.143	0.169	R2 0.999419909
0.072	0.752	0.798966249	0.39	0.55	3.853305436	2.652294761		0.286	0.328	
0.072	0.752	0.798966249	0.39	0.55	3.76786124	2.593482088		0.572	0.637	
0.072	0.752	0.798966249	0.39	0.55	ND	ND		1.145	1.211	
0.072	0.752	0.798966249	0.39	0.55	ND	ND				
0.072	0.752	0.798966249	0.39	0.55	1.396784813	0.955988265				
0.072	0.752	0.798966249	0.39	0.55	1.599714778	1.094877708				
0.072	0.752	0.798966249	0.39	0.55	2.817294565	1.928214365				
0.072	0.752	0.798966249	0.39	0.55	1.759922644	1.204527268				
0.072	0.752	0.798966249	0.39	0.55	1.759922644	1.204527268				
0.072	0.752	0.798966249	0.39	0.55	1.492909533	1.021778001				
0.072	0.752	0.798966249	0.39	0.55	ND	ND				
0.072	0.752	0.798966249	0.40	0.55	1.866727889	1.293895459				
0.072	0.752	0.798966249	0.40	0.55	1.813325267	1.256880203				
0.072	0.752	0.798966249	0.40	0.55	1.578353729	1.094013078				
0.072	0.752	0.798966249	0.40	0.55	ND	ND				
0.072	0.752	0.798966249	0.40	0.55	ND	ND				
0.072	0.752	0.798966249	0.39	0.55	ND	ND				
0.072	0.752	0.798966249	#DIV/0!	#DIV/0!	ND	#DIV/0!				
0.072	0.752	0.798966249	#DIV/0!	#DIV/0!	ND	#DIV/0!				
0.072	0.752	0.798966249	0.39	0.55	ND	ND				
0.072	0.752	0.798966249	0.39	0.55	ND	ND	%Rec			
0.072	0.752	0.798966249	0.39	0.55	6.352548156	4.347814661	100			

QC Results and Raw Data

Spectrophotometer Logbook

@Air Toxics Ltd.

Log Book #: 1564

Work Order: 0908456 (D

Date: 8/25/09

Analyst: A. Toyama

Method: Rad 170

Wavelength: 6665

Prep. Notes:

Standard ID	Concentration	ABS
1858-20-E	0.0716 ug/mL	0.088
-D	0.143	0.169
-C	0.286	0.328
-B	0.572	0.637
-A	1.145	1.211

r = 0.9994179
m = 1.044775
b = 0.023221

Fraction	Dilution	ABS	Sample ID	Sample Volume
41A	1.00	0.539	1006600	10.5 mL
42A		0.151	601	
43A		0.384	602	
44A		0.376	603	
45A		0.015	604	
46A		0.013	605	
47A		0.154	171	
48A		0.173	172	
49A		0.287	173	
50A		0.188	174	
51A		0.163	175	
52A		0.014	176	
53A		0.198	231	
54A		0.193	232	
55A		0.171	233	

Notes: Code 170 Lot 09075 Exp 04/010 used for Blanks. Sample lots unknown.

Signed: [signature]

Date: 8/26/09

Spectrophotometer Logbook

@Air Toxics Ltd.

Log Book #: 1564

Work Order: 0908456 C/D

Date: 8/25/09

Analyst: A. Toyama

Method: Rad 170

Wavelength: 6615

Prep. Notes: cont. from page 28

Standard ID	Concentration	ABS
18558-20-E	0.0716 ug/mL	0.088
-D	0.143	0.169
-C	0.286	0.328
-B	0.572	0.637
-A	1.145	1.211

r =

m =

b =

Fraction	Dilution	ABS	Sample ID	Sample Volume
56A	1.00	0.033	100234	10.5mL
57A		0.095	↓ 235	
58A		0.014	↓ 236	
41AA		0.538	100600	
50AA		0.188	↓ 174	
BLK		0.018	NA	
BLK		0.016		
8/26/09 Acq ~~LCS~~/CCV		0.618		

8/26/09
Acq

Notes: LCS/CCV prepared at 0.572 ug/mL

Signed:

Date: 8/26/09

0011

Spectrophotometer Standard Preparation Log

@Air Toxics Ltd. Log Book #: 1858

Standard ID: 1858-18
Project: Ferric Chloride ~~amine~~ 8/24/09 ACT RAD170
Analyst: A. Toyama
Preparation Date: 8/25/09
Expiration Date: 8/25/09

Solvent: DI H_2O
Solvent Lot #: NA

Procedure/Comments: Dissolve 25 g of ferric chloride hexahydrate (Located EB2C Lot 73297 MJ) in ~~125~~ 100 mL of DI H_2O.
8/24/09 ACT

8/24/09
ACT

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Signed _____ Date 8/25/09

Reviewed _____ Date 8/25/09

0012

Rev. 8/97

Spectrophotometer Standard Preparation Log **@Air Toxics Ltd.** **Log Book #: 1858**

Standard ID: 1858-19
Project: Ferric chloride - amine
Analyst: A. Toyama
Preparation Date: 8/25/09
Expiration Date: 8/25/09

Solvent: DI H_2O
Solvent Lot #: NA

Procedure/Comments: Mix 10 mL of ferric chloride solution with 50 mL of amine solution.

8/24/09
ACT

Page 19 Signed Date 8/25/09 Reviewed Date 8/25/09

Rev. 8/97

Spectrophotometer Standard Preparation Log @Air Toxics Ltd. Log Book #: 1858

Standard ID: 1858-20
Project: Calibration Solution BAD 170
Analyst: A. Toyama
Preparation Date: 8/25/09
Expiration Date: 8/25/09

Solvent: DI H_2O
Solvent Lot #: NA

Procedure/Comments:

Solution A: 2 mL of Code BAD 171 (1476-984, Exp 8/6/10, Located EB1B) with 98 mL DI H_2O = 1.145 ug/mL sulfide ions

Solution B: 25 mL of Solution A with 25 mL of DI H_2O = 0.572 ug/mL

Solution C: 1.25 mL of Solution A with 3.75 mL of DI H_2O = 0.286 ug/mL

Solution D: 0.625 mL of Solution A with 4.375 mL of DI H_2O = 0.143 ug/mL

Solution E: 0.375 mL of Solution A with 5.625 mL of DI H_2O = 0.0716 ug/mL
~~(Remove 1.0 mL of final solution)~~ 8/25/09
ACT

8/24/09
ACT

Signed 8/25/09 Date Reviewed 8/25/09 Date

Shipping/ Receiving Documents

Air Toxics LTD.
Laboratory Services Since 1989

180 Blue Ravine Road, Suite B
Folsom, CA 95630

Phone (916) 985-1000 FAX (916) 985-1020
Hours 8:00 A.M. to 6:00 P.M. Pacific

COMPANY:	Environmental Health & Engineering, Inc.
ATTENTION:	Mr. Taeko Minegishi
FAX #:	781-247-4305
FROM:	Sample Receiving
Workorder #:	0908456C
# of pages (Including Cover):	4

9/17/2009

Thank you for selecting Air Toxics Ltd. We have received your samples and have found no discrepancies. In order to expedite analysis and reporting, please review the attached information for accuracy. Corrections can be faxed to **Ausha Scott at 916-985-1020.**
ATL will proceed with the analysis as specified on the Chain of Custody and Sample Login page.

Environmental Health & Engineering, Inc.

CHAIN OF CUSTODY FORM

20 0908456

DATE: ~~21st~~ 20th Aug 09

FROM: Environmental Health and Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494-2725

TO: Air Toxics

Please send invoices to ATTN: Accounts Payable
Please send reports to ATTN: Data Coordinator

In all correspondence regarding this matter, please refer to EH&E Project # 16512

The cost of this analysis will be covered by EH&E Purchase Order # 16512

For EH & E Data Coordinator - URGENT DATA ☒

	SAMPLE ID	SAMPLE TYPE	ANALYTICAL METHOD/NUMBER	OTHER: Time/Date/Vol.
33A	100348	Air/Passive	H_2S Analysis	Ø
34A	100698	↓	↓	12D 18H 52M
35A	100699			↓
36A	~~1000~~ 100700			
37A	100701			
38A	100702			⊥
39A	100703			Ø
40A	100599			13D 18H 50M
41A	100600			↓
42A	100601			
43A	100602			
44A	100603			⊥
45A	100604			Ø
46A	100605			Ø
47A	100171			13D 20H 43M
48A	100172	⊥	⊥	⊥

Special Instructions:

☒ Standard turn around time ☐ Rush by ______ date/time ☐ Other FedEx 8704 2332 9291

☐ Fax results 781-247-4305

☐ **RETURN SAMPLES** ☒ Electronic transfer - datacoordinator@eheinc.com

☒ Additional report recipient mfrggala@eheinc.com

CUSTODY SEAL INTACT? Y N NONE TEMP 18°C

Each signatory please return one copy of this form to the above address

Relinquished by: [signature] of Environmental Health & Engineering, Inc. Date: ~~8/21/09~~ 8/20/09 pm

Received by: [signature] 0850 of (company name) ATC Date: 8/21/09

Relinquished by: ______ of (company name) ______ Date: ______

Received by: ______ of (company name) ______ Date: ______

Relinquished by: ______ of (company name) ______ Date: ______

Received by: ______ of (company name) ______ Date: ______

Lab Data Received by: ______ of Environmental Health & Engineering, Inc. Date: ______

Page 3 of 4

WHITE-EH&E FILE COPY YELLOW-LAB COPY PINK-PROJECT MANAGER COPY GOLD-DATA COORDINATOR COPY

0908456

Environmental Health & Engineering, Inc.

CHAIN OF CUSTODY FORM

DATE: 21 AUG 09

FROM: Environmental Health and Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494-2725

TO: AIR TOXICS

Please send invoices to ATTN: Accounts Payable
Please send reports to ATTN: Data Coordinator

In all correspondence regarding this matter, please refer to EH&E Project # 16512

The cost of this analysis will be covered by EH&E Purchase Order # 16512

For EH & E Data Coordinator - URGENT DATA ☒

	SAMPLE ID	SAMPLE TYPE	ANALYTICAL METHOD/NUMBER	OTHER: Time/Date/Vol.
49A	100173	AIR/PASSIVE	H_2S ANALYSIS	13D 20H 43M
50A	100174			
51A	100175			
52A	100176			Ø
53A	100231			13D 16H 32M
54A	100232			
55A	100233			
56A	100234			
57A	100235			
58A	100236			Ø

Special Instructions:

☒ Standard turn around time ☐ Rush by ______ date/time ☐ Other ______

☐ Fax results 781-247-4305

☐ **RETURN SAMPLES** ☒ Electronic transfer - datacoordinator@eheinc.com

☒ Additional report recipient mbagalu e eheinc.com

Fedex 8704 2332 4291

CUSTODY SEAL INTACT? Y N NONE TEMP 2°C 8/20/09

Each signatory please return one copy of this form to the above address

Relinquished by: [signature] of Environmental Health & Engineering, Inc. Date: 8/21/09 Ym

Received by: [signature] 0850 of (company name) ATC Date: 8/21/09

Relinquished by: ______ of (company name) ______ Date: ______

Received by: ______ of (company name) ______ Date: ______

Relinquished by: ______ of (company name) ______ Date: ______

Received by: ______ of (company name) ______ Date: ______

Lab Data Received by: ______ of Environmental Health & Engineering, Inc. Date: ______

Page 4 of 4

WHITE-EH&E FILE COPY YELLOW-LAB COPY PINK-PROJECT MANAGER COPY GOLD-DATA COORDINATOR COPY

Air Toxics LTD.
Laboratory Services Since 1989

SAMPLE RECEIPT SUMMARY

WORKORDER 0908456C

Client

Mr. Taeko Minegishi
Environmental Health & Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494

Phone

800-825-5343

Fax

781-247-4305

Sales Rep: TL

Date Promised: 09/01/09 11:59 pm
Date Completed: 9/16/09
Date Received: 8/21/09
PO#: 16512
Project#: 16512

Total $: $ 1,000.00
Logged By: MW

Fraction	Sample #	Analysis	Collected	Amount$
41A	100600	ATL Applications	8/19/2009	$50.00
41AA	100600 Lab Duplicate	ATL Applications	8/19/2009	$0.00
42A	100601	ATL Applications	8/19/2009	$50.00
43A	100602	ATL Applications	8/19/2009	$50.00
44A	100603	ATL Applications	8/19/2009	$50.00
45A	100604	ATL Applications	8/19/2009	$50.00
46A	100605	ATL Applications	8/19/2009	$50.00
47A	100171	ATL Applications	8/18/2009	$50.00
48A	100172	ATL Applications	8/18/2009	$50.00
49A	100173	ATL Applications	8/18/2009	$50.00
50A	100174	ATL Applications	8/18/2009	$50.00
50AA	100174 Lab Duplicate	ATL Applications	8/18/2009	$0.00
51A	100175	ATL Applications	8/18/2009	$50.00
52A	100176	ATL Applications	8/18/2009	$50.00
53A	100231	ATL Applications	8/20/2009	$50.00
54A	100232	ATL Applications	8/20/2009	$50.00
55A	100233	ATL Applications	8/20/2009	$50.00
56A	100234	ATL Applications	8/20/2009	$50.00
57A	100235	ATL Applications	8/20/2009	$50.00
58A	100236	ATL Applications	8/20/2009	$50.00

Note: Samples received after 3 P.M. PST are considered to be received on the following work day.
Atlas Project Name/Profile#: CPSC Indoor Air Monitoring/13297

BILL TO: Accounts Payable
Environmental Health & Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494

Analysis Code: Other GC

TERMS:

Reporting Method: ATL Application #59 H2S-Radiello 170

SAMPLE RECEIPT SUMMARY Continued

Client

Mr. Taeko Minegishi
Environmental Health &
Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494

Sales Rep: TL

Phone

800-825-5343

Fax

781-247-4305

Date Promised: 09/01/09 11:59 pm
Date Completed: 9/16/09
Date Received: 8/21/09
PO#: 16512
Project#: 16512

Total $: $ 1,000.00
Logged By: MW

Fraction	Sample #	Analysis	Collected	Amount$
59A	Method Blank	ATL Applications	NA	$0.00
59B	Method Blank	ATL Applications	NA	$0.00
60A	CCV	ATL Applications	NA	$0.00

Misc. Charges eCVP (20) @ $5.00 each. $100.00

Note: Samples received after 3 P.M. PST are considered to be received on the following work day.
Atlas Project Name/Profile#: CPSC Indoor Air Monitoring/13297

BILL TO: Accounts Payable
Environmental Health & Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494

Analysis Code: Other GC

TERMS:

Reporting Method: ATL Application #59 H2S-Radiello 170

Sample Discrepancy Report

Identification

Initiated By: MW **Project ID:**13297 **PM:** BL **Date:** 8/21/2009 **Discrepancy Type:** ☐ **1.** ☒ **2.** ☐ **3.**

Workorder(s) affected:0908456 **Sample(s) affected:** all

1. Sample Receipt Discrepancies

Narration Not Required:

1.1. ☐ Sample container (cartridge/tube/VOA vial) was received broken, however sample was intact.

1.2. ☐ No brass cap on canister.

1.3. ☐ Date of Collection noted on first sample, but no arrow down to indicate all samples.

Notify Lab for further determination:

1.4. ☐ Tedlar bag received with minimal volume.

Initials: _____ Date: _____

Narration Required in Lab Narrative and Sample Confirmation:

1.5. ☐ COC was not filled out in ink.

1.6. ☐ COC improperly relinquished / received.

1.7. ☐ Sample tags / can numbers do not match the COC.

1.8. ☐ Sample date ☐ error / ☐ missing on COC but noted on sample tag (check one).

1.9. ☐ Custody Seal on the outside of the container was ☐ broken / ☐ improperly placed (check one).

1.10. ☐ ID-none on the sample Tag/Blank

1.11. ☐ Other (describe below).

Describe the Discrepancy: _____

2. Sample Receipt/Screening Discrepancies requiring PM notification

Document on Cover Page of Sample Receipt Confirmation and in Receiving Notes of Lab Narrative

If Section II. is filled out PM must be notified within 24 hrs of initiation

2.1. ☐ COC was not received with samples.

2.2. ☐ Analysis method(s) is ☐ not specified / ☐ incorrectly specified (check one) on the COC.

2.3. ☐ Incorrect sampling media / container for analysis requested.

2.4. ☐ Number of samples on the COC does not match the number of samples that were received.

2.5. ☐ Samples were received expired.

2.6. ☒ Sampling date (time for sulfur) is not documented for ☐ *some* / ☒ *any* samples (check one).

2.7. ☐ Sample received with amount of H_2O in the Tedlar Bag.

2.8. ☐ Sample cannot be analyzed. Container was ☐ received broken / ☐ leaking / ☐ flat / ☐ defective.

2.9. ☐ Tedlar bag / canister received emitting a strong odor; Sample ☐ can / ☐ cannot (check one) be analyzed.

2.10. ☐ Tedlar Bag for Sulfur analysis has metal fitting.

2.11. ☐ Environmental Supply Company valves

2.12. ☐ Sorbent samples-sampling volume was not provided

2.13. ☐ Flow controller used – canister samples received at ambient or under pressure.

2.14. ☐ Canister was at ambient pressure at time of pressurization and (check all that apply):

- ☐ Canister failed leak check on two manifolds,
- ☐ Canister valve was open,
- ☐ Brass nut was loose/not present.
- ☐ Sample can be analyzed
- ☐ Cannot be analyzed

2.15. ☐ Canister sample received with a vacuum difference >5.0"Hg between the receipt vac. And the final vac. reported on the COC, indicating loss of vacuum.

2.16. ☐ Canister sample received at >15"Hg (*not* identified as a Trip/Field Blank).

2.17. ☐ Canister Trip Blank received at low vacuum (< 25"Hg).

2.18. ☒ Sorbent Sample received outside method required temperature of 2°C to 6°C; ☐ ice / ☒ blue ice (check one) was present. A temp. Blank ☐ was / ☒ was not present (check one).

2.19. ☐ Other (describe below)

Initials: _____ **Date:** _____ **Notify Receiving:** ☐ **Notify PM:** ☐

Describe the Discrepancy: samples rec'd at 8C

3. Lab Discrepancies requiring Team Leader/PM notification

Document in Analytical Notes of Lab Narrative

If Section III. is filled out PM must be notified within 24 hrs of initiation

3.1. ☐ Tedlar Bag found to be leaking at the time of analysis; sample ☐ can / ☐ cannot (check one) be analyzed.

3.2. ☐ Tedlar Bag found to be flat/low volume; sample cannot be analyzed.

3.3. ☐ Sulfur samples received with insufficient time to analyze prior to expiration.

3.4. ☐ Canister found to be leaking at the time of analysis.

3.5. ☐ VOST tube saturated; bag dilution necessary.

3.6. ☐ Sample loss due to instrument malfunction / broken glassware.

3.7. ☐ Low/high surrogate recoveries noted in QC/sample(s) for extractable samples.

3.8. ☐ Reporting Limit was raised.

3.9. ☐ Post weight > Pre weight in field/lab Blank for PM10/TSP samples.

3.10. ☐ Other (describe below).

Initials: _____ **Date:** _____ **Notify Receiving:** ☐ **Notify PM:** ☐ _____

Team Lead Initials: _____ **Date:** _____

Describe the Discrepancy: _____

_____

_____

How Does this Affect Client: _____

_____

_____

Project Manager Use Only

Project Manager Notification ☒ **Section 2 Complete** ☐ **Section 3 Complete**

Action:

☐ It is not necessary to notify the client. Narrate the discrepancy in Receiving Notes/Analytical Notes of Lab Narrative.

PM Initials:_____ Date: _____

☒ Client notification required. See attached client contact / email, or comments below:

Client Notification:

PM Initials:BL Person notified: David Shore Date: 8/21/2009

☐ Waiting for Client Reply

Comments: **Proceed and narrate temperature discrepancy. See table for time of collection.**

_____

☐ Notify Lab Name: _____ Date: _____ **Notify Receiving:** ☒

☐ **Additional notifications attached.**

Additional Comments:

_____

Other Records

Air Toxics LTD.
Laboratory Services Since 1989

Method : ATL Application #59 H2S-Radiello 170

CAS Number	Compound	Rpt. Limit (ug)
7783-06-4	Hydrogen Sulfide	1.2

@Air Toxics Ltd.

DATA REVIEW CHECKLIST

Work Order #: 0908456C

A_1	A_2	R	T	M	Q	
☐	☐	☑	☐	☑	☐	Analysis/Reporting vs. Project Profile/SOP requirements checked (i.e. 100% Dups, J-Flag to MDL, etc)
		☑	☐	☑	☐	The final report has the correct reporting list, special units, and header info.
		☐	☐	☐	☐	Lab Narrative is correct (proper method & description/Receiving & Analytical notes correct)
		NA	☐	☑	☐	Sample Discrepancy Report (SDR) is completed
☐	☐	☐	☐	☐	☐	Corrective Action issued - #
☐	☐	☐	☐	☐	☐	Unusual circumstances have been documented in the notes section below

LUMEN *validation report present and initialed* ***CIRCLE (YES / NO)***

☐	☐	☑	☐	☑	☐	Lab Blank, CCV, LCS and DUP met QC criteria
☐	☐	☑	☐	☑	☐	Hold time is met for all samples
		NA	☐	☐	☐	Appropriate data qualifier flags are applied
		☐	☐	☑	☐	Manual integrations for samples and QC are properly documented
☐	☐	☐	☐		☐	Samples analyzed within the project or method specific clock
		☑	☐			Retention times have been verified
☐	☐	☑	☐		☐	Appropriate ICAL(s) included
		☑	☐	☑	☐	At least one result per sample is verified against the target quant sheets/raw data
☐	☐	☑	☐		☐	Dilution factor correctly calculated (sample load volume, syringe and bag dilutions, can pressurization(s))
☐	☐	☑	☐			Correct amount of sample analyzed (i.e. sample not over-diluted)
		NA	☐			Spectra verified - documentation of spectral defense included (Section 5A of eCVP pkg)
		☐	☐			TICs resemble reference spectra
		☑	☐			TICs between duplicate samples are consistent
☐	☐	☑	☐	☑	☐	Checked samples for trends (i.e. Influent vs. Effluent, Field Dups, Field/Trip Blank, etc.)
☐	☐	NA	☐			Data for multiple analyses of sample(s) has been evaluated for comparability of results
		☑		☑		Special units for all samples in the final report are correctly calculated
		☑	☐	☑		Manually entered results checked (i.e. TPH/NMOC)
☐	☐	☑				Chain of Custody verified for any special comments (i.e. different compounds/RLs, action levels)
		☑				Chain of Custody scanned correctly
				☐		Verify sample id's vs. chain of custody
		NA				Date MDL(s) performed per instrument(s)
☐	☐	☐				Samples pressurized w/ appropriate gas (N_2 or He) ☑ Other (i.e. Tedlar bag, cartridge, sorbent)
☐	☐	☐				Final pressure consistent with canister size (6L vs. 1L)
☐	☐	☐				Verify receipt pressures
☐	☐	☐				Verify canister ID #'s
		☑		☑		Final invoice amount correct (adjusted for TAT, Penalties, Re-issue Charges etc.)
				NA ☐		MDL date(s) present for all instruments utilized
		NA	☐	☑	☐	Client LUMEN report reviewed for accuracy and completeness

Notes: *(to include: noting samples with QA/QC problems, Blanks with positive hits, narratives, etc.)*

A/R:

Dup. 41A, 50A

M/Q:

A_1/A_2 (Analytical Review/Date)	R/T (Reporting Review/Date)	M (Management Review/Date)	Q (QA Review/Date)
A_1:	R: LM 9/16/05	9/16/05	
A_2:	T:		

Note (1): Please check all the appropriate boxes. Indicate "NA" for any statement that does not apply. Rev. 02/2005

Note (2): Management reviewer and reporting reviewer must be separate individuals.